

U.S. Application No. 09/311,996
Attorney Docket Number 09367.0052-00000

In The Specification

Please replace the paragraph beginning at page 12, line 15, with the following:

Then, in a step 204, one or more descriptors of a state in the portions of the cells in the presence of the manipulation can be determined based upon the images collected by the imaging system. Descriptors can comprise scalar or vector values, representing quantities such as area, perimeter, dimensions, intensity, aspect ratios, and the like. Other types of descriptors include one or any combination of characteristics such as a cell count, an area, a perimeter, a length, a breadth, a fiber length, a fiber breadth, a shape factor, an elliptical form factor, an inner radius, an outer radius, a mean radius, an equivalent radius, an equivalent sphere volume, an equivalent prolate volume, an equivalent oblate volume, an equivalent sphere surface area, an average intensity, a total intensity and an optical density. In some embodiments, descriptors can include averages or standard deviation values, or frequency statistics from other descriptors collected across a population of cells. In some embodiments, descriptors can be reduced using techniques such as principal component analysis and the like. In some embodiments, the descriptors include features from different cell portions or cell types. A presently preferable embodiment uses descriptors selected from the following table. Other descriptors can also be used without departing from the scope of the invention.